STC-100
Standards Converter

User's Guide

http:// www.datavideo-tek.com

Rev: 240106

Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord's rating.
10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:
    a. When the power cord is damaged or frayed;
    b. When liquid has spilled into the unit;
    c. When the product has been exposed to rain or water;
    d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
    e. When the product has been dropped or the cabinet has been damaged;
    f. When the product exhibits a distinct change in performance, indicating a need for service.

Service and Support

It is our goal to make your products ownership a satisfying experience. Our supporting staff is available to assist you in setting up and operating your system. Please refer to our web site www.datavideo-tek.com for answers to common questions, support requests or contact your local office below.

Datavideo Corporation (USA)
12300-U East Washington Blvd., Whittier, CA 90606 USA
Tel: +1 562 696 2324 contactus@datavideo.us www.datavideo.us

Datavideo Technologies Europe BV
Californiedreef 26 3565 BL Utrecht, The Netherlands
Tel: +31 30 261 9656 info@datavideo.nl www.datavideo.info

Datavideo UK Limited
Unit 2 Waterside Business Park, Hadfield, Glossop, Derbyshire SK13 1BE UK
Tel: +44 1457 851000 sales@datavideo.co.uk www.datavideo.info

Datavideo Technologies Co., Ltd.
10F, 176 Jian-Yi Rd, Chung Ho City, Taipei Hsien, Taiwan 235
Tel: +886 2 8227 2888 service@datavideo.com.tw www.datavideo.com.tw

Datavideo Technologies China Co.
2F-D, 2 Lane 777, West Guangzhong Rd, Zhabei District, Shanghai, China
Tel: +86 21 5603 6599 service@datavideo.cn www.datavideo.cn

Datavideo Technologies (S) PTE Ltd.
No. 100, Lorong 23 Geylang, #01-03 D'Centennial Bldg, Singapore 388398
Tel: +65 6749 6866 info@datavideo.sg www.datavideo.info

Datavideo Hong Kong Limited
G/F., 26 Cross Lane, Wanchai, HK
Tel: +852 2833 1981 info@datavideohk.com www.datavideohk.com

Warranty

Datavideo warrants that the equipment it manufactures shall be free from defects in material and workmanship for a period of 12 months from the date of product purchased. If equipment fails due to such defects, Datavideo will, at its option, repair or provide a replacement for the defective part or product.

Equipment that fails after the warranty period, has been operated or installed in a manner other than that specified by Datavideo, or has been subjected to abuse or modification, will be repaired for time and material charges at the Buyer's expense. This warranty does not affect your statutory rights within the Country of purchase.

For EU Customers only - WEEE Marking.

This symbol on the product indicates that it will not be treated as household waste. It must be handed over to the applicable take-back scheme for the recycling of electrical and electronic equipment. For more detailed information about the recycling of this product, please contact your local Datavideo office.

Contents

INTRODUCTION	**5**
WHAT'S IN THE PACKAGE	**5**
CONNECTION DIAGRAM	**6**
FRONT PANEL	**7**
REAR PANEL CONNECTION	**8**
COLOR PROCESSOR	**10**
FACTORY RESET	**11**
SPECIFICATIONS	**12**

Introduction

The Datavideo STC-100 is a high quality bi-directional standards converter. It can convert NTSC to PAL – PAL to NTSC from Component (YUV), S-Video (Y/C) or Composite (CVBS) video sources. The built in TBC ensures optimum quality is maintained. The STC-100 can also convert from 0 IRE to 7.5 IRE and also from one format to another; i.e. S-Video to Composite etc.

What's in the Package

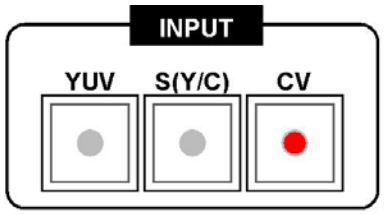
1. STC-100 unit
2. 3 x 1.2M BNC – BNC Cable
3. 1 x 1.2M S-Video – S-Video Cable
4. 12V DC Power Adaptor (100-240V AC input - 12V 1.5 A output).
5. User's Guide

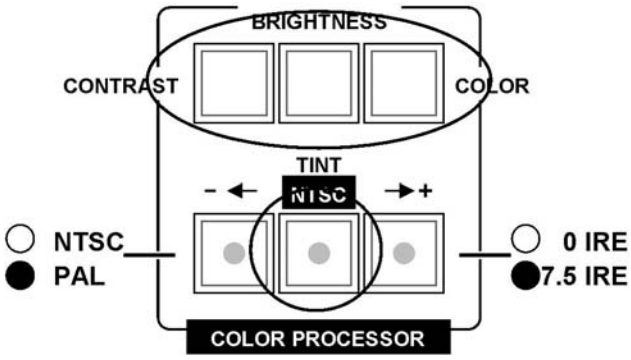
Connection diagram：

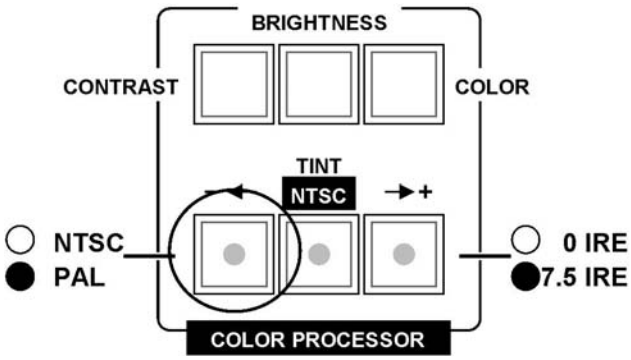
There are many possible combinations of connections to and from the STC-100. In this example a Component (YUV) PAL video signal is being converted to a Component (YUV) NTSC Video signal.

The principle is always the same; you connect a playback device of one standard to the inputs of the STC-100, and a record deck of the other standard to the output from the STC-100.
The STC-100 automatically recognizes the input as PAL or NTSC, so you only need to select the output format.

Front Panel







Input Select YUV / S(Y/C) / CV (Composite)

Select the video input format that you intend to use. The button of the selected input will glow red.

Contrast / Brightness / Color / Tint Adjustments

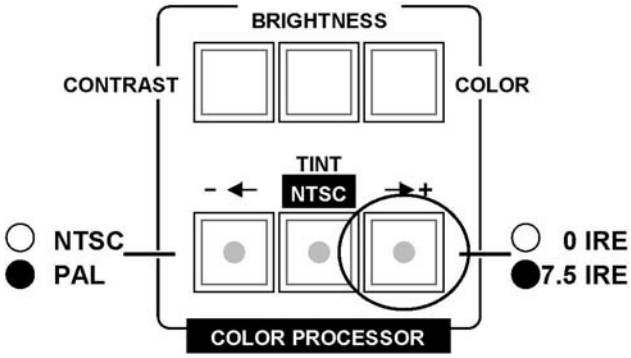
You can adjust the video image using the built in color processor.

Press the button of the attribute that you want to adjust, then use the + or – buttons to change the setting. TINT works on NTSC Composite and S-Video (Y/C) input only.

For further details see page 10.

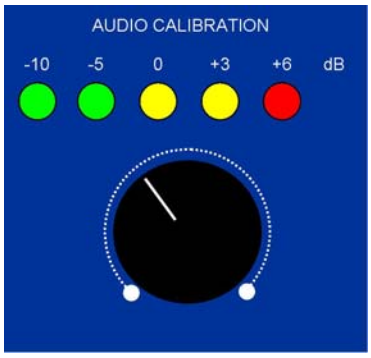
NTSC / PAL Output

The output can be set to NTSC or PAL. If the button is illuminated the output is set to PAL. (The STC-100 automatically sets the input to PAL or NTSC according to the video signal.)



0 IRE / 7.5 IRE

The black level output for NTSC can be set to 0 or 7.5 IRE. For North American NTSC use 7.5, for Japanese NTSC use 0. If the button is illuminated 7.5 IRE is selected.



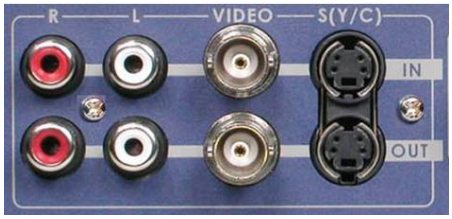
Audio Calibration

Allows you to set the audio level to avoid distortion. Ideally the first yellow light should be almost constant and the red light should only light up occasionally, when loud noises occur.

Rear Panel Connections

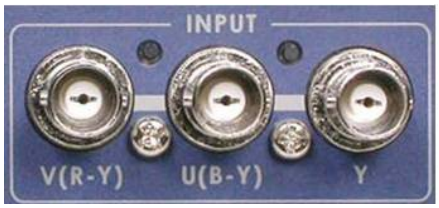
Power In Socket and On / Off Switch

Connect the supplied power adaptor to the DC Input socket. Once the plug has been inserted the locking collar can be screwed into place for a secure fit. Once all connections are in place switch the STC-100 on using the On / Off switch.



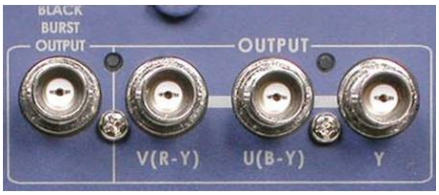
Composite (CV) / S-Video (Y/C) and Stereo Audio In / Out

Use these connections for Composite or S-Video (Y/C) and unbalanced stereo audio In and Out. The STC-100 can convert between formats i.e. S-Video in to Composite out etc.



Component YUV Input

Use these connections to connect Component YUV to the STC-100. YUV is the best possible video signal, so if you have it available as an output option on your player ,it is always best to use it



Component YUV Output with Black Burst

Use these connections to connect Component YUV out from the STC-100 to your record deck.

Color Processor

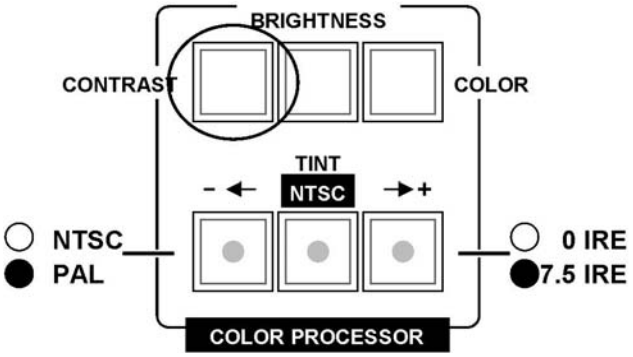
The built in color processor is very easy to use. The memory is non-volatile, so settings are saved, even when the STC-100 is powered off.

Setting the contrast, brightness, color saturation and tint (TINT is only for NTSC Composite or S-Video inputs), follows a similar procedure. In this example we are adjusting the contrast.

Make sure that you have a signal running from your video source (player) and a monitor connected to your record deck. You should be able to see the video image from the player on the monitor.

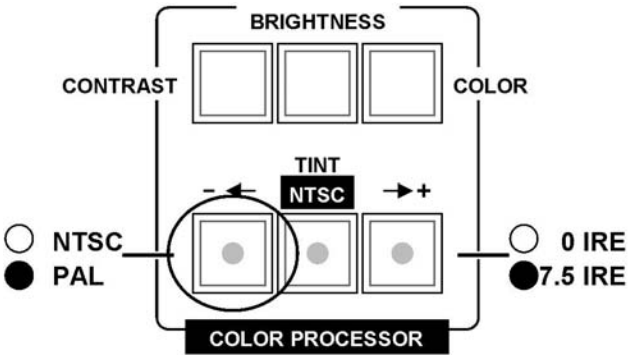
To adjust the contrast, press the CONTRAST Button.

(The procedure would be the same if you wanted to adjust the brightness, color saturation or tint. (TINT is only for NTSC Composite or S-Video inputs)

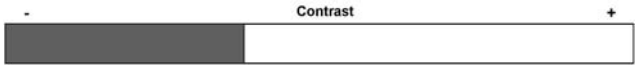


You will see the Contrast setting bar appear at the bottom of the TV screen

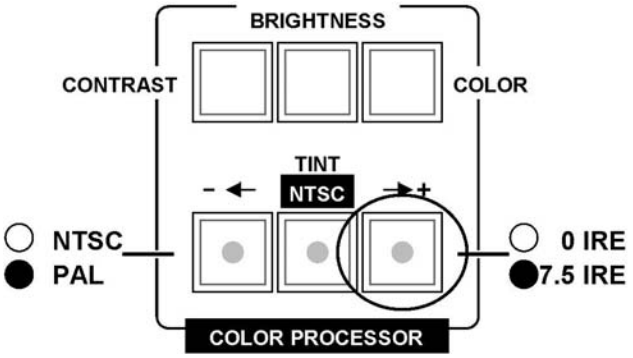
To reduce the contrast, press the – button.



Repeated presses of the – button will gradually decrease the contrast.



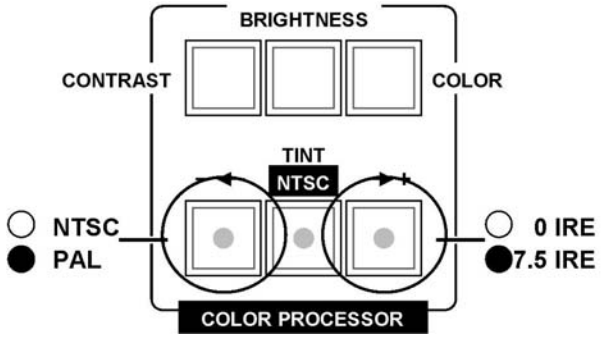
To increase the contrast, press the + button.



Repeated presses of the + button will gradually increase the contrast.

Once set as required, press the CONTRAST button to exit; the setting bar will disappear from the TV monitor.

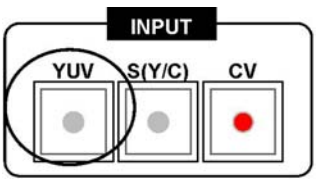
To reset any value (contrast, brightness, color or tint) press and hold the + or – button for four seconds



Factory Reset

Factory reset will return all color processor settings to neutral (factory default).

To return the STC-100 to factory defaults, press and hold the YUV button for 5 seconds



You will see the selected video input light (YUV, S(Y/C),CV) flash three times when reset has taken place.

Specification

Input

Video: CVBS, S-Video, YUV input

Audio: RCA (Phono)-Unbalanced (Stereo)

Output

Video: CVBS, S(Y/C), YUV, Black Burst output

Audio: RCA (Phono)-Unbalanced (Stereo)

Video Processing

Component	8-bit, 4:2:2, Y: 13.5MHz	
Frame Synchronization	Full Frame TBC	
Frequency Response (S input)	4.5 MHz +/-3dB	
DG, DP	+/- 3%, 3°	
S/N Ratio	>50 dB	

Video Correction：

Brightness	+/- 10%	
Contrast	+/- 3dB	
Color	+3/-10dB	
Tint	+/- 10°	(NTSC, CVBS and S-Video (Y/C) input only)

Audio level calibration：

S/N Ratio	>60dB
THD	<0.1%
Analog Bandwidth	20Hz~20kHz, +/- 3dB

General

AC Power Input	90 to 240V auto switching
DC Power Output	12V/1A (AC adapter included)
Ambient Temperature	32° - 131° F (0° - 55° C)
Ambient Humidity	Less than 90%

All the trademarks are the properties of their respective owners.
Datavideo Technologies Co., Ltd. All rights reserved 2006.
P/N: 082060382E2